

**Request to Archive
With The National Centers for Environmental Information
For MODIS Dust Mask Algorithm
Provided by OSPO**

2011-08-31

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

1. Who is the primary point of contact for this request?

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2. Name the organization or group responsible for creating the dataset.

3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.

The MODIS dust mask algorithm is responsible for dust detection for all MODIS pixels for the granules over the United States during daytime. Due to the relatively weak aerosol signal and large uncertainties associated with bright surface, the performance of the current algorithm is expected to be better for heavy dust events. The algorithm output is written in HDF4 format for dust flags with values: 0 (no dust) and 1 (dust). The algorithm also produces two bytes of quality control output which includes: Day/Night flag; Land/Ocean flag; Sun glint flag; and Cloud flags.

Spatial coverage: 25N~50N, 125W~65W

Spatial resolution: 1 km

Temporal resolution: once a day (all granules over CONUS)

Input:

The MODIS Dust Mask requires MODIS level 1 and level 2 data that include MOD021KM, MOD03, MOD04_L2, MOD07_L2, and MOD35_L2.

4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)

From 2012-05-15

Ongoing as continuous updates to the data record

5. Edition or version number(s) of the dataset:

6. Describe the level to which the data are processed. For example, are these unprocessed raw observations, derived parameters, quality controlled or inter-calibrated data, etc.?

MODIS Dust Mask Flag is a derived product. The algorithm uses MODIS deep blue channels to distinguish dust pixels from the bright background

7. Approximate date when the dataset was or will be released to the public:

8. Who are the expected users of the archived data? How will the archived data be used?

NWS/NCEP will use the data to verify its HYSPLIT dust forecasts.

9. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?

This product has been tested and implemented to run on STAR computers on a routine basis. Output of this product is being supplied to NCEP/NWS for their use and evaluation. NWS and STAR scientists meet every month to review/investigate this product for a while.

No documentation of this algorithm yet. It is based on GOES-R aerosol detection algorithm.

10. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?

11. List the input datasets and ancillary information used to produce the data.

MODIS/Aqua

12. List web pages and other links that provide information on the data.

No. Waiting for OSPO metadata standards

13. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.

1. Item name and description

14. Indicate the data file format(s).

1. HDF4

15. Are the data files compressed?

No

16. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).

All files use the following naming convention:

MODIS_ADP_Ayyyyddd.hhmm.MYD_mask_v6.3.4_db.hdf

Where,

yyyy is the year

ddd is the Julian day of the year

hh is the UTC hour

mm is the minute

17. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?

ftp pull from OSDPD distribution server SSD

or ftp from OSDPD anonymous ftp site:

ftp://satepsanone.nesdis.noaa.gov/GASP

18. What is the total data volume to be submitted?

Continuous Data: data volume rate for a continuous data production.

Total Data Volume Rate:

Data File Frequency:

Data Production Start:

19. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.

No additional updates, revisions or replacement data are anticipated.

20. Describe the server that will connect to the ingest server at NCEI for submitting the data.

Physical Location: Camp Springs, MD 20746

System Name: Diamond

System Owner: NESDIS>OSDPD>OSPO

Additional Information: Add comments as needed on applicable data types, etc.

21. What are the possible methods for submitting the data to NCEI? Select all that apply.

1. FTP PULL

2. FTP PUSH

22. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.

1. Direct HTTP/FTP

23. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?

No known constraints apply to the data.

24. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.

The MODIS Dust Mask archive data meet the NOAA mission goal to serve societys need for air quality and dust information. The MODIS Dust Mask archive data provide a satellite-based estimate of U.S. CONUS dust flag to air quality forecasters, who use it as an independent data source to verify modeling prediction of expected dust events.

25. Are the data archived at another facility or are there plans to do so? Please explain.

No

26. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?

This product has been funded through a NESDIS PSDI(product System Development and Implementation) project plan to develop an archive scheme and requirements.

27. Do you have a data management plan for your data?

No

28. Have funds been allocated to archive the data at NCEI?

No

29. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.

30. Is there a desired deadline for NCEI to archive and provide access to the data?

Archive by:

Accessible by:

31. Add any other pertinent information for this request.

For technical questions, please contact Shobha Kondragunta (Shobha.Kondragunta@noaa.gov)

Note:

This product will transition into NPP/JPSS era with VIIRS replacing MODIS.